

Remarks/Arguments

The election of Claims 1-17 and the withdrawal of claims 18-28 is confirmed.

Claims 1 and 3 have been amended to more clearly distinguish these claims from the prior art. Claim 6 has been amended to correct a matter of punctuation only. Claim 13 has been amended to additionally clarify the claim.

Claim 1 has been amended to recite that the relay disconnects a source from a load "after commencement of unmating of the electrical connector". Howell '872 cannot be relied upon to reject a claim including this limitation. The circuit disclosed in Howell '872 is employed to decrease the current through separable contact means *prior to opening the contact means*. "Prior to load current interruption the FETs are in full conduction, so that there is a minimal voltage drop across the controlled impedance means. Interruption is initiated by decreasing FET conduction thus increasing the voltage drop across the controlled impedance means to divert load current prior to opening the separable contact means." Col. 3, lines 27-33. Howell '872 shows a circuit that is used with switches 28 that are driven apart by a contact driver only after load current flow exceeds a predetermined allowable magnitude as sensed by current sensor 82.

The invention recited in claim 1 as amended includes an electrical connector with two separate halves. Arcing is to be eliminated only upon disconnection of the two electrical connector halves, which will take place at an arbitrary time and will not be dependent upon the load

current flow on any other electric or electrically sensible factor. The electric connector is disconnected to physically disconnect the source from the load, and the first action that can be sensed in disconnection of the terminals, which will commence before the solid state relay begins to open.

The FETs employed in Howell '872 also do not comprise a solid state relay. Instead the voltage across these FETs is increased to cause current to be temporarily diverted through a parallel current diverter, thus decreasing current passing through the switch, serially connected to the FETs, to a level that will permit the switching contacts to be opened without arcing. See Col. 5, lines 22-41. If alternatively, the entire circuit shown in Howell '872 is considered to be a relay, only because it interrupts a circuit, then the switch 28 cannot be considered to be an electrical connector as stated in the rejection. The single switch 28 must then be relied upon as disclosing two different claimed elements, and the rejection would be improper.

Claim 1, at least as amended, is neither anticipated by Howell '872 nor obvious over this reference in view of Didier '392. Although Didier does disclose an electrical connector, this connector includes short sense pins or contacts 64 that are connected to a relay 54. The relay is not connected between a source and a load, as are power contacts 58, 62. The relay 54 instead activates a main circuit breaker 56 to disconnect the three power conductors 50. Since Didier functions in a different manner from that claimed herein, it is not understood how they could lead to an obvious design choice to one of ordinary skill in the art.

Howell '872 also cannot be relied upon to reject claim 3, and the claims dependent thereon for the reasons discussed with respect to claim 1. Furthermore Didier does not disclose first and second contacts joined together in one electrical connector half as now recited in claim 3. Although sense contacts 64 are joined together, they represent sense pins, and would not be subject to arcing as claimed with respect to the first contact means.

With respect to claim 7, it would appear that even if a battery, as opposed to an alternating current source, were connected to a load, there would still be a leakage path through the current diverter 54.

With respect to claim 11, the sense contacts 60, 64 are at a different voltage than the power contacts 58, 62 of Didier.

Howell does not disclose parallel power MOSFETs as recited in claim 12.

Since the FETs of Howell do not disconnect the source from a load, this reference cannot be relied upon to reject claim 13 and the claims dependent thereon.

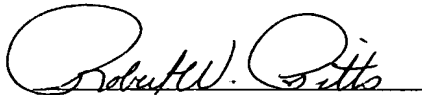
The claims now pending are believed to be allowable over the prior art of record. Issuance of a Notice of Allowance in response to this Amendment is therefore courteously solicited.

A copy of the IDS referred to in this action is enclosed.

The undersigned attorney has submitted this response at the request of Robert J. Kapalka, an Attorney of Record. Please address any further communications to the Correspondence Address of Record. Should it be necessary to contact an Attorney by telephone, please initially attempt to contact Robert J. Kapalka at 302-633-2771. If Mr. Kapalka cannot be reached, please contact the undersigned attorney at 336-760-9565.

Respectfully Submitted

Lyle Stanley Bryan, Applicant

A handwritten signature in cursive script, appearing to read "Robert W. Pitts", written over a horizontal line.

Robert W. Pitts

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